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MUSIC PUBLISHING IN BRITAIN CA. 1840-1900

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IN 1994 THE ESSENCE OF A DEBATE in the history of technology was neatly captured in the book title *Does Technology Drive History? The Dilemma of Technological Determinism*¹. Technological determinism considers developments to

[...] take place outside society, independently of social, economic, and political forces. New or improved products or ways of making things arise from the activities of inventors, engineers, and designers following an internal, technical logic that has nothing to do with social relationships [...] technological change causes or determines social change².

In the last few decades of the twentieth century an increasing number of scholars questioned this notion, arguing that technological developments were driven by social factors. A recent expression of this view is found in Mark Kurlanskys *Paper: Paging Through History*, the Introduction to which states unequivocally that «Studying the history of paper exposes a number of historical misconceptions, the most important of which is this technological fallacy: the idea that technology changes society. It is exactly the reverse. Society develops technology to address the changes that are taking place within it»³.

Technological development is rarely straightforward. Sally Wyatt observes that «from the many histories and contemporary case studies of technological change we know how messy and ambiguous the process of developing technologies can be»⁴. Technologies that are adopted are not always the best ones. Brian Arthur examines why gasoline cars became the norm, rather than the steam and electric models that were developed around the same time. His discussion of early car manufacture leads him to some broader conclusions about the ways in which technology is adopted:

¹. SMITH – MARX 1994.

². HACKETT – AMSTERDAMSKA – LYNCH – WAJMAN 2008, p. 168.

³. KURLANSKY 2016, p. xiv.

⁴. WYATT 2008, p. 172.

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First, the technology that ‘wins’ a market does not necessarily have to be the ‘best’ or most efficient [...]. Second, an industry (or economy) can get ‘locked-in’ to a technological path that is difficult to get away from. As more and more people choose one technology from a group of competing technologies, that technology becomes more attractive [...]. Third, even with hindsight, the reasons why a particular technology came to be adopted are difficult to pinpoint. Exact causality is hard to ascribe [...]. Fourth, even if we know all the preferences and possibilities of those choosing, the outcome — the share of the market taken by each technology — is often impossible to predict in advance⁵.

The relationship of technology to music publishing in the period ca. 1840 to ca. 1900 was complex, but undoubtedly driven by social and commercial factors. Multiple technologies were used concurrently in the creation of the musical image as well as in the printing process. Engraving, lithography and stereotyping — the latter being used in conjunction with moveable music type — all featured. None of these techniques was new, and some of them were distinctly elderly. Around 1700 engraving had taken over from moveable type as the most common form of music production, but enthusiasm for the latter was rekindled on the continent towards the end of the eighteenth century and was used again in London before the middle of the nineteenth. Lithography had been invented in the closing years of the eighteenth century and was taken up by a number of continental music publishers, but it was slow to gain ground in England. Stereotyping had been developed centuries earlier, but underwent significant change in the course of the early nineteenth century and began to be used for music publishing a few decades later.

Music printing was a small part of a much larger publishing enterprise. The increasing demand for published materials of all kinds prompted the developments from which music publishers profited: very few of the techniques and tools used by music printers were unique to the music industry, and developments were largely the result of the need to produce mass copies to tight schedules in the newspaper industry.

Patterns of music consumption changed radically in the course of the nineteenth century⁶. Around 1800 it was mostly the social elite who purchased printed music⁷. Sales were modest and music publishers’ catalogues were limited. It was not unusual for publishers to produce just 100 or 200 copies, or even less, of works such as sonatas, or quartets⁸. But even at this time a new popular market was emerging, as songs and other small-scale works began to be sold in their thousands for the expanding domestic market⁹.

⁵. MACKENZIE – WAJMAN 1999, p. 107.

⁶. Many texts describe the social background to music making in the nineteenth century. Among the most relevant are: EHRlich 1985, HERBERT 2000, WEBER 2004, McVEIGH 2006 and DRUMMOND 2016.

⁷. HUME 2015, especially p. 415.

⁸. Print runs are discussed in ROWLAND forthcoming.

⁹. SMALL 2011, p. 381; AN 2008, p. 196.

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The demand for printed music continued to expand in the second quarter of the century as the lower middle- and working-classes gained greater access to music. Musical instrument ownership increased, access to concerts began to widen, the choral society and brass band movements grew, and so on. There was increased demand for cheap, popular domestic music as well as scores for community music-making. Market segmentation became a feature, even quite early in the century, as the catalogues containing publishers' complete outputs became unwieldy and gave way to more specialised lists dedicated to genres, or to works for particular instruments or composers¹⁰.

An illustration of the market's expansion is found in the printing and distribution data for Novello's choral works and treatises in the firm's stock book from November 1858 to May 1869¹¹. Novello's best seller, the octavo edition of Handel's *Messiah*, was reprinted many times. (Less popular pocket-sized and folio editions were also printed.) The earliest stock book entries record that 5000 copies were printed in December 1858. Another 12,000 followed in 1859 and in December 1860 a further 6000 rolled off the presses. Such numbers would have been unthinkable 50 years earlier, and further growth followed as the century drew to a close. Cyril Ehrlich points out that disposable incomes rose significantly in the last quarter of the century, raising demand for music yet further, and this inexorable market growth caused the music profession to expand rapidly: Ehrlich refers to the period as «the flood»¹².

It is against this background of sustained growth that we examine the behaviour of the music publishing industry in the second part of the nineteenth century.

NOVELLO, D'ALMAINE & CO., AND MASS PRODUCTION

The 1840s marked a crucial moment in the mass production and dissemination of music as some of the bigger companies rose to the challenge of publishing large quantities of scores at low prices by changing their production methods. Novello and D'Almaine & Co. were at the forefront of these developments, as witnessed by their publication of two short, but rare and important documents towards the end of the 1840s¹³. Of the two publishers it was almost certainly Novello who first announced his new publishing approach by producing a brief, eight-page booklet in 1847. I say 'almost certainly', because

¹⁰. AN 2008.

¹¹. British Library MS. Mus. 824. Similar data for instrumental music must have been kept in another stock book, unfortunately lost. See COOPER-DEATHRIDGE 1987 for a description of the stock book and BURROWS 2007 for a description of Novello's mass production of Handel scores.

¹². See EHRlich 1985, chapters 3 and 5.

¹³. NOVELLO 1847, British Library, shelfmark 11900.d.42; D'ALMAINE & CO. 1848, British Museum, number 1880,1113.5962.

although page 1 of Novello's booklet clearly identifies it as having been published in 1847, D'Almaine & Co.'s booklet cannot be dated with complete certainty. '1848' is written in pencil on the front cover of the British Museum copy, but no other definitive evidence for its year of publication exists, although other factors suggest 1848 as a plausible date: in places, as we will see, the text appears to be a response to Novello's 1847 booklet, and works that D'Almaine & Co. published around 1850 are referred to in the booklet as «now publishing»¹⁴.

The purpose of Novello's 1847 booklet was to advertise his new approach to printing for the mass market. The booklet begins:

J. ALFRED NOVELLO begs to inform his friends and patrons that he has latterly organised a Printing house for the production of works in Typography in general, and more especially for such as require Moveable Music Types. The cheap and popular editions of the Oratorios which are now in course of publication, may be cited as creditable specimens of his workmanship¹⁵.

Later in the booklet he explains that:

By the process of Stereotyping, a very large number of pages can be successfully produced from a fount of type, and still leave the type at liberty to compose fresh pages [...]. The economy of printing from these Types arises from the shorter time required to ink the projecting surfaces, and in the power to print several pages by the same operation: with care, the number of impressions which one Stereo-plate will yield may be said to be without limit. Of the disadvantages formerly existing against Musick Types, an important one has been removed by the increased varieties of characters; and any musick, however complicated, can now be produced with them. The great object with the publisher of a work from Moveable Type being to sell a very large number of copies, he usually marks the price of his work proportionately low to increase the sale¹⁶.

Novello did indeed offer a number of works at low prices around the middle of the century. Vocal scores of Handel's *Messiah* and Haydn's *Creation* sold for 6s and 5s respectively¹⁷. In addition to competitive pricing Novello came up with a scheme to help customers spread the payment of these works, which were advertised to be purchased in monthly instalments.

Novello's oratorio scores were remarkably cheap compared with earlier nineteenth-century vocal scores. For example, Clementi's keyboard arrangement of the *Creation*,

¹⁴. POOLE 1978-80, pp. 73-74.

¹⁵. NOVELLO 1847, p. 3.

¹⁶. *Ibidem*, pp. 7-8.

¹⁷. COOPER 2003, p. 12.

published in 1801 by Longman, Clementi & Co., sold at £1. 6s., more than five times the cost of Novello's later edition¹⁸. Not only do these prices reflect the different markets serviced by the two publishers, but the formats of the editions reflect the performance circumstances in which the scores were used. Novello's octavo vocal scores are compact and easily hand-held whereas the larger, folio edition issued by Longman & Clementi's could only realistically be supported on a stand. The former clearly suited performers in large and cramped oratorio choruses while the latter were presumably intended for use in a domestic setting, or for concert performances with smaller forces for which music stands were available.

Novello's new approach to printing and publishing seems to have spurred D'Almaine into action. Following a description of the company's premises and an explanation of the process of printing from engraved plates D'Almaine's booklet has a short section entitled 'Moveable Music Types'. It is here that he makes what is surely a pointed reference to Novello's adoption of the technique, although he neither mentions his rival firm by name, nor the process of stereotyping: «This species of musical typography, which is formed of the same material [pewter, used for engraving plates], and is printed in the same manner as Letter-press, is very unsightly, and is only useful to those whose capital is too limited to produce extensive works on pewter»¹⁹.

Under the heading a 'New Process for Producing Printed Music' the booklet explains that:

Messrs. D'ALMAINE & Co. have recently introduced a new and very superior mode of producing printed music, at a charge infinitely lower than by the old processes, whilst the notation is rendered beautiful and agreeable to the eye. As they have not made the invention public, we are precluded giving the details, but would recommend our readers to inspect the edition of Handel's Works, edited by Sir Henry Bishop, now publishing in numbers, at the extraordinarily low price of sixpence, each number containing sixteen imperial quarto pages²⁰.

What was the 'new process' used by D'Almaine & Co.? Having examined some of D'Almaine's mid-century editions of Handel's choral works, Edmund Poole concluded:

In view of this evidence — inferential though much of it is — it would appear reasonable to assume that [Handel's] *Israel in Egypt* and *Acis and*

¹⁸. Longman, Clementi & Co.'s edition of Clementi's edition was printed with a price of £1.1.0 on the title page, but the copy I have seen has the price altered in manuscript to £1.6.0, the same figure as advertised in the first announcement of the edition in *The Morning Post and Gazetteer* on 5 January 1801. Subsequent copies issued by Clementi & Co. also have the price £1.6.0. printed on the title page.

¹⁹. D'ALMAINE & CO. 1848, p. 6.

²⁰. *Ibidem*, p. 6.

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Galatea were printed lithographically by way of transfer from proofs taken off engraved plates. Certainly, Jullien was using the process successfully by 1851; so, assuming that D'Almaine were experimenting in 1848, it would have been wise commercial practice to draw a veil over their techniques²¹.

The process of lithographic transfer described by Poole is discussed below.

Novello's and D'Almaine & Co.'s booklets and scores of the late 1840s and early 1850s are evidence of competition for shares in the new mass market for scores of choral works. Each found a printing method that reduced costs and enabled scores to be priced competitively. But they adopted different technologies, the merits and problems of each were finely balanced. These and other contemporary printing technologies will be examined shortly, following some further observations about the two firms' booklets.

Both booklets describe a business model in which all parts of the printing process took place under one roof. Earlier in the century it had been usual for parts of the business to be outsourced²², but as publishing houses grew it became more economical for them to group the component parts of their businesses together. D'Almaine & Co.'s booklet shows in detail how this was done. It begins with a description of the building, including the rooms set out for musical instruments and printed scores ready for purchase. In the course of this description it is noted that the company has «the capabilities of printing Lithography, Copper-plate, and Letter-press, on their premises»²³. A description of the room in which lithographic stones were stored follows, in the course of which the author observes that the lithographed title pages are «drawn on the premises, by several eminent artists who are constantly employed by the Firm». Next are described the basement rooms with fire-proof doors which housed the engraving plates, and the process of engraving is outlined.

Although the text does not explicitly say so, it is clear that printing took place in the same building as all the other functions described so far. Not only was printing done in-house, but even the ink that was used was made on the premises: «The Ink is made by boiling linseed, or nut oil, in an iron pot; it is then mixed with the proper quantity of lamp black, and ground on a stone with a muller, until it attains the consistency of thick paste, a *drier* being added to make the ink set firmly on the paper»²⁴.

The following paragraphs are devoted to a description of the way in which the firm's hand-operated printing press worked, ending with a description of the drying and cleaning process: «After the impressions are taken off, they are hung up separately to dry, and the

²¹. POOLE 1978-80, pp. 73-74.

²². COOPER-DEATHRIDGE 1987.

²³. D'ALMAINE & CO. 1848, p. 3.

²⁴. *Ibidem*, p. 6.

pewter plates being carefully rubbed over with olive oil to prevent their rusting, are placed in THE PLATE CELLARS, until another supply of printed music is required»²⁵. The booklet ends with an extensive account of lithographic printing.

Novello's booklet does not contain the same level of detail as D'Almaine & Co.'s, but there are hints that all of the processes necessary to publish music were housed on the firm's premises, a suggestion that is corroborated by other evidence. At the beginning of the booklet «VINCENT NOVELLO begs to inform his friends and patrons that he has latterly organised a Printing house [...]»²⁶. This may be an understatement: a later inventory lists several presses and other equipment dating from the 1840s and early 1850s (see below, under 'paper and printing presses'): Novello evidently invested heavily in the business as he set it up to take advantage of a new mass market.

Novello's investment extended to purchasing new fonts for moveable type which he describes as having been «cut at a very considerable cost [...]. The whole of the fount and the matrices being the property of J. ALFRED NOVELLO exclusively»²⁷. Having invested in printing tools Novello kept his workforce busy by offering the service to others: «J. ALFRED NOVELLO will be happy to undertake the Printing of Authors' Works, either by the old method of Plates, or by Moveable Types; and he will be ready to assist Printers by setting-up Musical Examples for those who do not make Musical Typography a branch of their business»²⁸.

Novello's booklet includes comments on the advantages and disadvantages of different music production processes and «The Economics of MUSICK PRINTING»²⁹ to which we will return in the course of a discussion of individual printing techniques.

ENGRAVING

Engraving is the first process discussed here, not because it was the oldest, but because it was the most common means by which music was printed for much of the nineteenth century. The vast number of engraving plates that were produced at the time can be judged by the size of the cellars which housed D'Almaine's stock of plates: «These depositories of plates consist of intricate labyrinths underground, of immense extent [...]. Some idea of the great space which they occupy may be formed, when it is known that plates, weighing several hundred tons, are here compiled as compactly as possible»³⁰. The

²⁵. *Ibidem*.

²⁶. NOVELLO 1847, p. 3.

²⁷. *Ibidem*, p. 5.

²⁸. *Ibidem*, p. 8.

²⁹. *Ibidem*, p. 6.

³⁰. D'ALMAINE & CO. 1848, p. 4.

vast number of plates in use at this time is also evidenced in auction sales catalogues, which list hundreds of thousands of engraved plates³¹.

Engraving on metal plates was a technique used at least as early as the fifteenth century but it was not until the second quarter of the sixteenth century that music was printed by the method³². Subsequent to its first application to music publishing the process was used for several hundreds of years and was only eventually made obsolete by computer printing at the very end of the twentieth century: a video made in 2008 on the website of G. Henle Verlag says that the firm used engraving for its Urtext editions until the late 1990s³³.

In the engraving process, small indentations were made on metal plates which were then inked and pressed against paper to create the final product. The image had to be engraved in reverse so that it was the right way round once it had been transferred onto paper. Some of the earliest music to be produced in this way used only freehand drawing, in which metal scrapers were used to mark the metal plates. In the nineteenth century, however, metal punches (for clefs, note-heads, rests, and so on) were used in conjunction with scraping (for stave lines, slurs, etc).

Whereas maps and illustrations were engraved on copper plates, or later on steel, music from the late seventeenth century onwards in England was engraved on pewter³⁴, an alloy containing 85%–99% tin which is softer, easier to work, and cheaper than copper. Because engraved images other than music were usually made on copper, the process was often generically referred to as copper-plate printing, as it is on page 3 of D'Almaine's booklet. However, both D'Almaine and Novello unequivocally refer to engraving on pewter in their detailed descriptions of the process³⁵.

Engraving on pewter plates had several advantages over other printing methods. The process was flexible: pewter was soft and malleable, making it «pliable to the *graver*»³⁶, and both standard and non-standard characters and shapes could be engraved on the same plate with ease. Corrections could be made by beating the reverse side of the plate until the original indentations disappeared. The process was cheap: Novello observed that «The cost of producing a page of musick on a Pewter Plate is comparatively small» while D'Almaine referred to the cost of engraving with pewter as «trifling compared with copper»³⁷. Of course, it was not just the cost of the pewter plates that was low at this time, but also the labour cost of the engraver: as labour costs increased the process became less competitive.

³¹. See COOVER 1987 for a list of auction sales in the period: the summary information sometimes includes the number of plates sold at individual auctions.

³². KRUMMEL – SADIE 1990, pp. 40–41.

³³. <<https://www.henle.de/en/about-us/music-engraving/>>, accessed April 2019.

³⁴. KRUMMEL – SADIE 1990, p. 101.

³⁵. D'ALMAINE & CO. 1848, pp. 3, 5; NOVELLO 1847, p. 6.

³⁶. D'ALMAINE & CO. 1848, p. 5.

³⁷. NOVELLO 1847, p. 6; D'ALMAINE & CO. 1848, p. 5.

Another advantage of the method was that it enabled a nineteenth-century equivalent of the modern 'print-on-demand' process. Having noted the relative cheapness of engraving on pewter Novello observed that «there is a further advantage of being able to print fifty copies only [...] as economically as any number of hundreds, thereby saving the accumulation of useless stock, and lots of interest on the cost of the paper — great advantages in a work of slow or doubtful sale, or the demand for which is likely to be limited»³⁸.

Finally, engraving produced the sharpest and most aesthetically pleasing printed music images of any process at the time. Over a hundred years later this was one of the main reasons why Henle retained engraving in their flagship Urtext editions right up to the end of the twentieth century.

There were just two main disadvantages of engraving, both of which proved significant as the market for cheap printed music expanded. Firstly, as noted by both Novello and D'Almaine, plates engraved on pewter had a limited lifespan. Novello was the more pessimistic of the two, pointing out the disadvantage of «the early wearing out of the plates from 1300 to 2000 impressions, according to the goodness of the workmanship»³⁹. D'Almaine's estimate was higher: «Music engraved on pewter will throw off upwards of two thousand impressions, without flaw or blemish, if skilfully worked through the press»⁴⁰. These sorts of numbers had been unproblematic for eighteenth and early-nineteenth century publishers, because most of the music they sold was never printed in those sorts of quantities: new plates were only engraved when one or two of a set became damaged, or if an edition sold unusually and spectacularly well. But as the market for printed music increased the cost of regularly re-engraving plates for a whole oratorio, for example, would have added considerably to the cost of printing.

Secondly, although the pewter plates and the cost of engraving were relatively cheap, other elements of the process were not, causing Novello to refer to «the comparatively high cost of the printing»⁴¹. Damped paper was used which was thicker and more expensive than that used in some other printing processes, and the time taken to transfer the image to the paper was longer than for other methods⁴². Once the printing was done the paper had to be hung in the drying room until it was ready for binding. All of this took time and expense which mattered relatively little earlier in the century when small print runs of costly editions were the norm, but it was inconvenient and expensive when cheap, mass-produced scores were introduced.

³⁸. NOVELLO 1847, pp. 6-7.

³⁹. *Ibidem*, p. 7.

⁴⁰. D'ALMAINE & CO. 1848, p. 5.

⁴¹. NOVELLO 1847, p. 7.

⁴². DEVRIÈS-LESURE 2005, p. 78.

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For all these positive and negative reasons, it is understandable why mid-nineteenth century music publishers retained engraving for editions that were aimed at connoisseurs, but not for music produced for the ever-growing popular market.

MUSIC TYPE AND STEREOTYPING

Printing from moveable type is centuries old. In the 1450s it was the process used by Gutenberg for printing his famous bible and the process was applied to music printing not long afterwards. A detailed description of the making of moveable type is given in Krummel and Sadie's *Music Printing and Publishing* but the essentials are these⁴³. Each component of music notation — stave lines, note-heads, and so on — is cast in metal in the same way that individual letters are cast, and a page of music is assembled by a compositor who fits all of the individual pieces together into a matrix. That matrix is then inked before a piece of paper is pressed against it to produce an image.

Printing from musical type was unsatisfactory for a number of reasons. Its appearance was inelegant — for example, early music editions made from moveable type are characterised by broken stave lines in which the gaps between individual pieces of type are clearly visible — and printing anything more than single notes on a stave was difficult. It was also an inflexible method of printing. Since musical type was a precious commodity it was uneconomic for publishers to store matrices for lengthy periods in case they needed to reprint from them: it was better for matrices to be broken up so that the type could be re-used. Publishers therefore needed to be careful about the number of copies they printed. If they printed more than they sold they were left with unwanted copies, but if they sold all of the copies quickly they had to re-assemble the matrices for further print runs. Engraving was a much more flexible means of producing printed music scores, so it is no wonder that it replaced printing from moveable type at the end of the seventeenth century. But the process of printing music from moveable type did not disappear altogether. Famously, the Leipzig firm Breitkopf & Härtel — one of the largest music-publishing firms in Europe — adopted it in the late eighteenth century and it made a comeback in the nineteenth century when it was used in conjunction with stereotyping.

According to Kubler, stereotyping was invented in China in the 11th century and gained ground slowly in Europe from the fifteenth century⁴⁴. Lenneberg succinctly describes the technique: «text was set into type as if for the letter press, but instead of using the form of printing directly, it was used to make a matrix of plaster or papier-mache into which a special alloy was poured in order to make a plate»⁴⁵. Prints were then taken from that metal plate.

⁴³. KRUMMEL – SADIE 1990, pp. 11ff.

⁴⁴. KUBLER 1941.

⁴⁵. LENNEBERG 1984, p. 239.

Several attempts were made to improve the process of stereotyping, notably by Earl Stanhope, who saw a future for it in music printing that he was unable to realise⁴⁶. Nineteenth-century developments mostly concerned the material of the mould into which the alloy was poured, plaster of Paris giving way to papier mache. By the time Novello began to use the technique the process had undergone considerable development, but it was still relatively new in terms of its widespread commercial use. Novello can therefore be regarded as something of a pioneer in his adoption of it.

Stereotyping had some disadvantages. As Novello pointed out: «The page produced by Musick Types must be costly, because the types are expensive to purchase, and require considerable time and skill to compose them into the required page»⁴⁷. And once the music type had been set up a further stage was involved, because a mould had to be taken from it and a metal cast made of the image. This costly two-stage process made the technology unsuitable for anything less than mass production. A further issue, which does not seem to have concerned Novello, is that the resulting image was not as elegant as one produced by engraving. D’Almaine viewed it as «very unsightly»⁴⁸. Finally, once the plates that were used for printing were made it was difficult to correct any mistakes.

Despite its shortcomings, stereotyping had many advantages, as Novello explained:

By the process of Stereotyping, a very large number of pages can be successfully produced from a fount of type, and still leave the type at liberty to compose fresh pages [...]. The economy of printing from these Types arises from the shorter time required to ink the projecting surfaces, and in the power to print several pages by the same operation: with care, the number of impressions which one Stereo-plate will yield may be said to be without limit [...]. The great object with the publisher of a work from Moveable Type being to sell a *very large* number of copies, he usually marks the price of his work proportionately low to increase the sale⁴⁹.

Stereotyping also had the advantage that the printing plates could be ‘cleaned’ to remove any flaws that would otherwise have resulted from printing directly from musical type. So, for example, in editions produced with stereotyped plates the stave lines are almost always perfectly continuous, without the gaps frequently found on pages printed from moveable type. Novello’s stereotyped editions have a very clean appearance and were easy to read, but arguably at the expense of appearing rather clinical. Features such as the completely regular positioning of rests with respect to stave lines, the uniform distances between note-heads and dots, and the absence of any variation in the appearance of flags

⁴⁶. KASSLER 2011, pp. 389–393.

⁴⁷. NOVELLO 1847, p. 7.

⁴⁸. D’ALMAINE & CO. 1848, p. 6.

⁴⁹. NOVELLO 1847, pp. 7–8.

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attached to note-stems, lack the more natural elegance of engraved musical text. Perhaps it was the utter uniformity of the text that D'Almaine found «very unsightly».

No. 1. **OVERTURE.**

GRAVE. *2nd time p*

f

tr

1st. 2nd.

8

ALLEGRO MODERATO

8

Handel's "Messiah,"—Novello's Edition.

ILL. 1: Novello's 1846/1847 edition of Handel's *Messiah*, p. 3.

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This page contains the musical score for Handel's "Messiah," specifically the section where the Messiah describes his suffering. The music is written for voice and harpsichord. The vocal part is in G major, while the harpsichord accompaniment is in D minor. The tempo is marked "un poco piano." The lyrics are: "He gave his back to the smiters, He gave his back to the smiters, and his cheeks to them that plucked off the hair, and his cheeks to them that plucked off the hair, he hid not his face from shame and spitting, he hid not his face from shame, from shame, he hid not his".

He gave his back to the smiters, He gave his back to the
un poco piano.

smiters, and his cheeks to them that plucked off the hair, and his cheeks to
them that plucked off the hair, and his cheeks to them that plucked off the
hair, he hid not his face from shame and spitting, he hid not his
face from shame, from shame, he hid not his

Handel's "Messiah."—Novello's Edition.

ILL. 2: Novello's 1846/1847 edition of Handel's *Messiah*, p. 73.

Stereotyping has received little attention from historians of music printing, yet it was important to music publishers in the late nineteenth century. Just how important it was for

Novello is evident from an inventory of the firm's estate dated 1898, now in the British Library⁵⁰. The inventory lists 91,869 stereotype plates, 117,902 engraved plates and 33,727 lithography stones, suggesting that stereotyping by that time was at least as important as engraving (taking into account the probability that many engraved plates were several decades old) and considerably more important than lithography.

Another prominent firm to use the technique of stereotyping was set up by John Curwen in 1862/1863⁵¹. An article in *The Musical Opinion and Music Trade Review* of 1894 refers to their «printing, stereotyping and bookbinding works» at Plaistow⁵², and describing the firm as printers of tonic sol-fa and stave notations for cheap music. Unfortunately, the secondary literature on Curwen rarely refers in detail to the primary sources from which it is drawn, but Curwen's biographer Herbert Simon evidently had access to information from the Ginbey family, four generations of whom had worked at the firm, beginning with H. J. Ginbey, who began his apprenticeship in July 1891⁵³. According to Simon, Curwen acquired his music type from The Patent Type Founding Company in Red Lion Square, just off Southampton Row, and he was very protective of it:

Music type was expensive and there was a strict rule that no printing was to be done direct from the type. All music, after it had been passed as correct by the proof-reader was sent to the foundry where a plaster of Paris cast was made and from the mould a metal plate was cast. Printing was done from the metal plate, this saving music type from premature wear and allowing it to be released for 'distribution' and use on the next job⁵⁴.

James Coover's inventory of auction catalogues from the years 1831 to 1931 shows that a large number of stereotyped plates were sold in the period 1880–1900⁵⁵. The largest auction at which stereotyped plates were sold took place over a 13 day period starting on 15 December 1890. The stock of S. J. Brewer & Co. was auctioned by the firm Puttick & Simpson who issued a «Catalogue of the stock of upwards of 90,000 engraved and stereotyped music plates»⁵⁶. A further auction of 50,000 engraved and stereotyped plates belonging to Metzler & Chappell was sold over six days starting on 31 May 1880. Other firms specifically mentioned as selling stereotyped plates were Pohlman and Sons, Agate & Co, Morley & Co., Stanley Lucas, Weber, Pitt & Hatzfeld (all of London), Lyon and Hall (Brighton) and David Swan (Glasgow). Unfortunately, neither the auction catalogues nor

⁵⁰. British Library MS Mus.828.

⁵¹. See CURWEN 1882 for a history of Curwen's printing enterprise.

⁵². *The Musical Opinion and Music Trade Review*, XVIII/199 (1894), p. 451.

⁵³. SIMON 1973, p. 42.

⁵⁴. *Ibidem*, p. 43.

⁵⁵. COOVER 1987.

⁵⁶. The Puttick & Simpson auction catalogues, with notes on purchasers, are held in the British Library. A catalogue is held at the reference desk in the Rare Books and Music reading area.

the trade journal itemise the stereotype plates, so we have no idea of how many changed hands in these sales, or what music was printed using the technique.

LITHOGRAPHY

Lithography was invented by Alois Senefelder who worked on various versions of the process from 1796. It is unnecessary to describe the early history of the technique since Michael Twyman's deals definitively with the subject⁵⁷. D'Almaine's booklet provides a brief two-part description of it.

First, D'Almaine outlines the fundamentals of the process, which used limestone slabs and relied on the mutual repulsion of oil and water:

A drawing is made upon the stone, with ink or crayon, of a greasy composition, it is then washed over with water, which sinks into all parts of the stone not protected by the drawing. A cylindrical roller, charged with printing ink, is afterwards passed all over the stone, and the drawing receives the ink, whilst the water defends the other parts from it on account of its [the ink's] greasy nature⁵⁸.

A subsequent passage amplifies this brief description:

Before the stone is covered with ink, it must be dipped in nitric or sulphuric acid, diluted with water, so that a slight effervescence is produced; the proportion of acid should be but little more than one per cent, this will cause the stone to imbibe water more readily in the parts not covered with the drawing. This process is called "*etching the drawing*"; after this, it is merely dipped in common water. The acid must not be too strong, otherwise it would injure the fine strokes and tints. When the stone has imbibed sufficient water, a liquid mixture is poured over it, consisting of one-sixth of linseed oil, two-sixths of oil of turpentine, and three-sixths of pure water; this again must be wiped off clean, and the stone covered with a solution of gum Arabic in water, which prevents the lines from spreading, and immediately after this process it is inked⁵⁹.

D'Almaine's description of lithography only ever mentions its use for the production of title pages, including coloured images: from his brief account it appears that he probably did not use the method for drawing music directly onto stones.

However, Edmund Poole suggests that D'Almaine used lithographic transfer — the new method of printing referred to above — for large quantities of music. The process

⁵⁷. TWYMAN 1996.

⁵⁸. D'ALMAINE & CO. 1848, p. 7.

⁵⁹. *Ibidem*, p. 8.

seems to have been new to D'Almaine & Co., though it had been used previously in Europe. An image could be transferred to a lithographic stone in a number of ways. A waxy image could be made on transfer paper which was then transferred to the stone, or an image from a pewter plate could be rolled through a printer and then transferred. Later, from around 1860, photography began to be used to transfer the image in the process called photo-lithography⁶⁰. In all cases an image that was the right way round was pressed against the stone to produce a back-to-front image, which was then transferred to paper. In most instances this saved time and money, since there was no need for anyone to write a reverse image on the stone — a special skill that needed considerable practice.

While lithography had been fairly widely adopted in continental Europe in the first half of the nineteenth century, it was scarcely used in Britain. Why was this? Twyman suggests that engraving was simply too dominant in Britain to allow a different technology to gain a foothold in the music trade⁶¹. But perhaps it also had to do with the raw materials used in the process. Anyone involved with lithography knew that the most suitable limestone came from Germany: D'Almaine & Co. prided themselves in having a good stock of German stone⁶². Perhaps the cost of transporting the stone several hundreds of miles was also an inhibitor to lithography's adoption in Britain.

As with the other printing methods described above, lithography and lithographic transfer had advantages and disadvantages. The very best examples of lithography compete with engraving for image clarity, yet lithography all too often produced images that are 'fuzzy' compared with the results of other processes. This was particularly true of lithographic transfer. Further disadvantages were that lithography required a particular type of paper: as D'Almaine observes: «The paper for lithographic impressions should be considerably thicker than for ordinary printing, and it should not be so much damped as for copper-plate printing»⁶³. In addition, the stones were heavy, and much bulkier to store than engraved metal plates.

Notwithstanding these disadvantages, lithography was generally acknowledged to be cheaper than engraving — possibly by as much as one-third⁶⁴. Factors that contributed to this economy were the speed with which the image could be drawn, the relatively small quantity of ink that was required and the quick paper drying time. Some sources suggest that high numbers of impressions could be taken from each stone, making it preferable for large print runs⁶⁵, and errors could be corrected relatively easily.

⁶⁰. For more detail see KRUMMEL – SADIE 1990, pp. 60–61.

⁶¹. TWYMAN 1996, p. 106.

⁶². D'ALMAINE & CO. 1848, p. 7.

⁶³. *Ibidem*, p. 8.

⁶⁴. TWYMAN 1996, p. 43.

⁶⁵. DEVRIÈS-LESURE 2005, p. 84.

D'Almaine's detailed description of lithographic printing only refers to printing from stone plates, but printing from zinc plates had existed from at least as early as the 1820s⁶⁶, albeit for low-grade work. However, zinc came into its own at the very end of our period, when the material was found to be suitable for wrapping around the cylinders of the new printing presses. The adoption of this new technique made printing from stone obsolete.

PAPER AND PRINTING PRESSES

In addition to the various methods described above, the production of music scores was serviced by new technologies of paper making and printing. Developments in both of these industries were driven by the general expansion of the publishing industry, and particularly by the growth of newspaper publishing, which required growing quantities of copies printed to tight schedules. It was particularly for this market that the mass production of paper and fast printing technologies were developed.

Paper had traditionally been produced by a process in which the wet pulp from rags was laid on frames, the moisture squeezed out and the residue left to dry⁶⁷. The use of rags (sometimes other material such as cotton) produced high-quality paper, but in the first half of the nineteenth century demand quickly outstripped the availability of the raw materials. Rags were imported, but these could not easily satisfy the market and it became inevitable that other materials were investigated. In the middle of the century esparto grass imported from south-western Europe and northern Africa was found to produce high-quality paper and in the 1880s wood pulp began to be used, especially for low-grade paper.

In the first half of the century the manual production of paper gave way to machine processes, notably with the invention of a machine by the Fourdrinier family (of French origin, who were resident in England). These steam-driven machines made paper on a moving wire mesh which took the pulp through its various processes. Fourdrinier machines vastly increased the speed with which paper was made and therefore the capacity of the paper mills. Although this technology was adopted relatively slowly, not least because it was expensive, these developments in paper making, along with reductions in taxes and tariffs, reduced the cost of printing and made cheap editions more viable.

The essentials of printing press design changed little between the invention of Gutenberg's press and the beginning of the nineteenth century. In Gutenberg's press downward pressure was exerted in order to transfer an image from the inked original

⁶⁶. TWYMAN 1996, p. 68.

⁶⁷. Details of paper making are found in SHORTER 1971 and KURLANSKY 2016. For a brief account see MCKITTERICK 2009, pp. 92-96.

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onto paper. Hand-operated machinery of this sort was slow and heavy to use. In the early nineteenth century the process was made quicker and physically easier with the introduction of so-called 'Albion' presses, which were invented in the second decade of the century and remained popular for many decades.

Cylinder presses were developed at more or less the same time as 'Albion' presses. They were quicker than Albions and ran off steam power. These presses were expensive and were slow to be adopted, but as they came into use they proved particularly well-suited to mass production. The most common sort of cylinder press was the so-called 'Wharfedale'.

Novello's inventory of 7 March 1898 lists a number of presses under two headings; «machines» and «presses, hand»⁶⁸. The assumption is almost certainly that the first group were steam-powered while the second group were hand-operated. In the first group there were 5 cylinder presses, of which four were termed «Wharfedales». None of these machines was dated. In the second category 21 presses of various sizes are mentioned, virtually all of them dated, and 16 of which were «Albions». The dates of these presses show a pattern of expansion within the firm which matches Novello's engagement with the new mass market. The earliest press is dated 1836. Then four date from the mid-late 1840s, while one is from 1850 and five are from 1851. Only one other dates from the 1850s, but there must then have been a period of further expansion or renewal in the 1860s, since three more date from 1864. Thereafter, just five hand-operated presses are listed dating from 1867 to 1877.

CONCLUSIONS

In the period ca. 1840-1900 the British music publishing industry responded to the challenge of supplying the new mass market by adopting new processes and methods of production. Novello and D'Almaine & Co. show how the larger publishers consolidated their businesses by concentrating all aspects of music printing and sales under a single roof: their business model became distinct from the one adopted by publishers at the beginning of the century, who routinely outsourced several parts of the printing process.

New printing technologies for the wider publishing industry had developed in both Britain and Europe which were taken up by British music publishers. Novello and D'Almaine & Co. adopted practices that had not been used previously in British music publishing, especially for the parts of their businesses that required mass production. Novello adopted stereotyping only a relatively short time after the technique had undergone major

⁶⁸. British Library MS. Mus. 828.

developments in the first decades of the nineteenth century. With stereotyping went music typography, a technique that had been in existence for several centuries, although the new type used by Novello was a considerable improvement on the old. D'Almaine followed a different path, choosing transfer lithography. In doing so, he bucked the trend of British music publishers, who had avoided lithographic methods of music printing, probably because engraving was so entrenched in the business. Both, however, had found effective ways of producing scores for the new market which not only used the new printing methods, but which also took advantage of cheaper paper and quicker printing presses.

Aside from using technologies suited to the mass market Novello and D'Almaine remained committed to engraving, which was not only flexible in so far as it could be used for small print runs where necessary, but it also produced the highest-quality results. This ensured that old technology was used alongside the new (or relatively new) in a context that was increasingly diverse and complex.

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